Material Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: SODIUM CHLORITE, 7.5% w/w

Company Name: CULBEAG HOLDINGS Pty Ltd (ABN 95 007 197 079)
Address: 19 Allied Drive Tullamarine VICTORIA 3043 Australia
Emergency Tel.: 03 9335 4400
Telephone/Fax Number: Tel: 03 9335 4400 Fax: 03 9335 1750
Email: sales@culbeag.com.au
Recommended Use: Water treatment chemical.

2. HAZARDS IDENTIFICATION

Hazard Classification:
Classified as a DANGEROUS GOOD(1): CHLORITE SOLUTION; UNNO 1908, Class 8 - CORROSIVE
Classified as a HAZARDOUS SUBSTANCE (2): IRRITANT
Irritating to eye and skin.
Contact with acids liberates very toxic gas.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
After contact with skin wash immediately with plenty of water.
Wear suitable gloves and eye/face protection.
Keep away from acids.

Other Information: Avoid contact with combustible materials.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water</td>
<td>7732-18-5</td>
<td>91.5-92.5 %</td>
</tr>
<tr>
<td></td>
<td>Sodium Chlorite</td>
<td>7758-19-2</td>
<td>7-8 %</td>
</tr>
<tr>
<td></td>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>0-0.2 %</td>
</tr>
<tr>
<td></td>
<td>Sodium Chlorate</td>
<td>7775-09-9</td>
<td>0-0.2 %</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Remove affected person(s) to fresh air immediately. Keep patient warm and quiet. If breathing is difficult oxygen can be given by a trained person. If not breathing, commence artificial respiration. Obtain medical attention promptly or transport to a hospital immediately.

Ingestion: Do NOT induce vomiting. Never give fluids or induce vomiting if patient is unconscious or having convulsions. Give plenty of water to drink. Seek medical advice immediately.

Skin: Wash affected area with water (and soap) while removing contaminated clothing and footwear. Obtain medical attention assistance promptly if irritation persists.


First Aid Facilities: Treat symptomatically based on the reactions of the patient.

Advice to Doctor: In case of decomposition of the sodium chlorite or reaction with an acid, chlorine dioxide may be released and cause respiratory problems. Immediately remove affected person to fresh air. If breathing is difficult give oxygen. If not breathing apply artificial respiration. Seek medical attention immediately.

Other Information: Advice could be obtained from Poison Information Centre (Telephone 13 11 26 in Australia) or a doctor at once.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water. Do NOT use carbon dioxide or organic material based fire extinguishing media.
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Specific Hazards
Sodium chlorite solution may decompose to chlorine dioxide by exposure to heat (fire) and direct sunlight. Containers may overpressure and rupture in confined storage areas. Contact with acidic materials e.g., acids, aluminium polychlorine, ferric chloride, magnesium sulfate, promotes the formation of chlorine dioxide with the risk of an explosion. Reducing agents e.g., sodium sulphite may cause violent exothermic reactions. Combustible materials such as wood, cellulosic materials such as cotton, paper, cardboard or fatty products, grease, oils, may cause fire and possible explosion.

Hazchem Code
2X

Precautions in connection with Fire
Fire-fighters should wear full protective clothing including self-contained breathing apparatus. Use water to extinguish fire source. Do NOT use carbon dioxide or organic material based extinguishing media. Avoid, if possible, dispersment of fire fighting media and run-off into water courses.

Unsuitable Extinguishing Media
Organic material and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal
Eliminate all sources of ignition. Keep unnecessary people out of the area of the spill. Clean-up personnel should wear suitable protective clothing and self-contained breathing apparatus. Contact the relevant authorities. Remove all incompatible materials and substances if a safe practice. Do not allow solution to dry, keep diluted or wet with water. Keep spill out of drains, sewers, surface waters, soil and biological water treatment systems. Contain the spillage with sand or earth. Do NOT use sawdust or any other combustible product for containment. Use a pump to transfer spilled material into suitable drums for disposal. Clean up residual material with water and neutralise with a controlled addition of a suitable reducing agent e.g., sodium sulphite or bisulphite. Any spilled product must be removed before it dries because flammable and explosive mixtures can formed with combustible and flammable substances and materials.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Handle product with care. Avoid any contamination. Set up a safe work procedure for handling product. Do NOT return any product (including samples) to the original container or tank (risk of decomposition). Use only glass, ceramic, polyethylene, polyester or PVC materials. Do NOT use steel, aluminium, copper and copper alloys, rubber.

Conditions for Safe Storage
Store in a cool, well-ventilated place. Keep away from acids, combustible substances and materials and heat sources. Keep out of direct sunlight.

Storage Regulations
Class 8 CORROSIVE. Store according to the Dangerous Goods Storage and Handling regulations of the jurisdiction in which the product is being stored.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards
A National Exposure Standard (NES) has NOT been established for this product. However, the NES(3) approved by SWA(4) for chlorine dioxide is; 0.1 ppm, TWA and 0.3 ppm, STEL; where TWA = means the Time Weighted Average concentration of a particular substance determined over a normal 8-hour working period for a 5-day working week. STEL = Short Term Exposure Limit, meaning a 15 minute TWA concentration which should not be exceeded at any time during a working day.

Engineering Controls
Ensure adequate ventilation to keep atmospheric concentrations of chlorine dioxide below the exposure standard. Local exhaust ventilation may be required for some operations. Design processes to avoid the generation of aerosols and/or mists.

Respiratory Protection
Not normally required; however, if chlorine dioxide is evolved wear an approved [5, 6] self-contained breathing apparatus. An approved [5, 6] air-purifying respirator fitted with an combination mist/chlorine removal cartridge may be worn for short periods if aerosol or mist accidentally generated.

Eye Protection
Wear approved safety (chemical) goggles and face shield selected and used in
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Body Protection
accord with relevant Australian Standards [7,8].
Wear approved protective work clothing and gloves made of synthetic materials such as PVC or neoprene. Refer to Australian Standard for general requirements of occupational protective clothing [9] and test methods [10, 11] for resistance of materials to liquid chemicals. Avoid wearing leather (e.g. aprons and/or foot wear), cotton or natural rubber products due to risk of fire. Check protective clothing and equipment regularly for effectiveness and soundness.

Hygiene Measures
It is a good work practice to wash hands and face thoroughly after handling and before eating, drinking, or smoking, before using toilet facilities and at the end of work periods and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance
Light yellow solution with a slight odour of chlorine.
Boiling Point
Approximately 105°C
Solubility in Water
Miscible
Specific Gravity
Approximately 1.1
pH Value
11.5 (100g/L solution in water @ 20°C)
Vapour Pressure
Not determined.
Flash Point
Not applicable for a water solution of an inorganic salt.
Flammability
Product is not flammable or combustible. The dried product is a strong oxidising agent which can promote fire with combustible materials impregnated with the solution and dried. The solution does not pose a fire or explosion risk as supplied.

10. STABILITY AND REACTIVITY
Stability and Reactivity
Exposure to heat and sunlight may decompose sodium chlorite into chlorine dioxide with the risk of overpressuring sealed containers
Incompatible Materials
Acidic materials such as acids, aluminium polychloride, ferric chloride, magnesium sulphate promotes release of chlorine dioxide. Uncontrolled reaction with reducing agents may cause violent reaction with evolution of heat. Do NOT use steel, aluminium, copper and copper alloys, rubber for storage or transfer of this product.

11. TOXICOLOGICAL INFORMATION
Toxicology Information
No information available for this product. However based on data available for 31% sodium chlorite product this product is anticipated to be harmful if swallowed and is conservatively classified as corrosive for transport but irritating to eyes & skin.
Inhalation
Vapour may be irritating to respiratory tract i.e. mucous membranes, throat and possibly the lungs. In case of decomposition of this product, inhalation of chlorine dioxide may occur.
Ingestion
May be harmful if swallowed. May cause moderate to severe irritation, possibly burns, to mouth, gullet and stomach if swallowed.
Skin
Irritating to skin. Will cause moderate irritation. Prolonged or frequently repeated skin contact may even cause burns.
Eye
Irritating to eyes. Possible risk of serious injury and damage to eye(s).
Chronic Effects
No relevant information available.

12. ECOLOGICAL INFORMATION
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Product Name: SODIUM CHLORITE, 7.5% w/w

Information on Ecological Effects
For sodium chlorite
Fish, LC50, 96 hr: >500mg/l
Daphnia magna, EC50, 48hr; <1mg/l, very toxic.
Bacteria (activated sludge), EC50, 3hr: 6.5 mg/l

Environ. Protection
Potentially harmful to aquatic organisms. Prevent from entering sewers, closed conduits or rivers.

13. DISPOSAL CONSIDERATIONS

Waste Disposal
Disposal in accordance with all relevant regulations applicable in your area of operations for the spilled material. Do not add any other chemicals unless directed by a responsible person.

Container Disposal
Triple rinse/wash the empty container before responsible disposal, return to supplier or recycle.

14. TRANSPORT INFORMATION

Transport Information
Classified as a dangerous good - Class 8 - CORROSIVE - for transport by road, rail, sea or air.
Ship in plastic drums. Other suitable materials for packaging are stainless steel, glass, ceramics, polyethylene, PVC.
Do NOT use steel, aluminium, copper and copper alloys, rubber.

U.N. Number
1908

Proper Shipping Name
CHLORITE SOLUTION

DG Class
8

Hazchem Code
2X

Packaging Method
3.8.8

Packing Group
III

EPG Number
8D1

IERG Number
37D

15. REGULATORY INFORMATION

Regulatory Information
Classified as hazardous to health according to the approved criteria approved by SWA[2].
Hazard Category. IRRITANT.
For labelling purposes;
RISK PHRASES:
R36/38: Irritating to eyes and skin.
R32: Contact with acids liberates very toxic gas.
SAFETY PHRASES:
S14: Keep away from acids.
S26: In case of contact with eyes rinse immediately with plenty water and seek medical advice.
S28: After contact with skin wash immediately with plenty of water.
S37/39: Wear suitable gloves and eye/face protection.

Poisons Schedule
Not Scheduled

Packaging & Labelling
Container to be labelled with relevant DG information [1].
If decanted into other containers, label the container in accord with the Code of Practice for labelling workplace (hazardous) Substances [12].

AICS (Australia)
Active ingredient is included in AICS [13].

Other Information
Keep away from combustible materials.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS
Revised 21 August 2012. No change to format described in the SWA (NOHSC) Code (14) for preparing a MSDS. Other changes made to hazard classification, National Exposure Standards section, Body protection, toxicological information, revision of references.

Contact Person/Point
BUSINESS HOURS: Product Information Officer, (03) 9335 4400
This MSDS summarizes our best knowledge of the health and safety hazard information of this product and how to safely handle and use the product in the workplace. Each user must review this MSDS in the context of how the...
product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Literature References

[8] AS1336: Recommended practices for eye protection in the industrial environment.

...End Of MSDS...